

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (canceled)

Claim 8 (new): A functional molecular element comprising a system in which an anisotropy of a dielectric constant is changed by a molecular structure change induced by an electric field.

Claim 9 (new): The functional molecular element according to claim 8, wherein the functional molecular element includes a complex of an organic molecule having anisotropy of dielectric constant or dipole moment and including side chains each of which structure is changed under application of electric field, and metallic ion.

Claim 10 (new): The functional molecular element according to claim 9, wherein the side chain has a linear chain shape, and is substantially bonded to the disc-shaped organic molecule.

Claim 11 (new): The functional molecular element according to claim 10, wherein a liquid crystal solution of organic metallic complex molecule that includes the organic molecule having the side chains is disposed between at least opposite electrodes in a state where orientation of the organic metallic complex molecule is performed on an electrode for applying electric field, and an output corresponding to the electric field is taken out from at least one electrode of the opposite electrodes.

Claim 12 (new): The functional molecular element according to claim 11, wherein a columnar arrangement structure in which the organic metallic complex molecules are arranged in a column form is formed between the pair of opposite electrodes.

Claim 13 (new): The functional molecular element according to claim 11,

wherein the structure of the organic metallic complex molecule is changed by a change of the electric field exerted on the organic metallic complex molecule so that an angle that a major axis direction of a dielectric constant tensor and a formation plane surface of a pair of opposite electrodes form is changed.

Claim 14 (new): The functional molecular element according to claim 12,
wherein an insulating layer is provided on a first electrode for applying the electric field, a second electrode and a third electrode are formed, as the opposite electrodes, on the insulating layer so as not in contact with each other, the columnar arrangement structure is disposed between at least the second and third electrodes, and a fourth electrode for applying the electric field is provided on the columnar arrangement structure directly or through an insulating layer.